## SUBTRACTING ZERO

This shows 20.


Take away 0. How many are left? $\qquad$

This shows 30.


Take away 0. How many are left? $\qquad$

Let's look at some equations!


# MAKING ZERO 

This shows $5 . \quad$ Take away 5.


How many are left? 0

This shows $6 . \quad$ Take away 6.


How many are left?


$$
100-1100=
$$

$\qquad$
$2110-2110=$ $\qquad$

$$
28-28=
$$



Write 3 subtraction equations that equal 0 .


Solve the problem. Show your work.
The school raised \$3500 and donated $\$ 3500$ to a children's charity. How much money do they have left?

Write your own story problem using a property of 0 .
Write it.

Solve it.

\section*{PUTTING IT ALL

# TOGETHER 

}
# TOGETHER 

}Use what you know about ZERO to find the differences.
500-500=

$25-25=$ $\qquad$ $6501-0=$

Use the differences to create a tally chart:
Differences that
are O
Differences that are NOT 0

## Jor the Jeacher

## Level \#2: One Less

The following section will provide practice and reinforcement of "one less" concepts.

The level begins with a brief review of subtracting 1 from a number between 0 and 9999.

After the review, students will learn to use their knowledge of one less to subtract larger numbers in the 10's, 100's, and 1000's.

For example, students can relate the following 4 equations:


# ONE LESS 

| NUMBER | I LESS |
| :---: | :---: |
| 174 | 173 |
| 300 |  |
| 4678 |  |
| 2009 |  |
| 51 |  |
| 6800 |  |
| 431 |  |


| NUMBER | I LESS |
| :---: | :---: |
| 275 |  |
| 2181 |  |
| 9040 |  |
| 762 |  |
| 54 |  |
| 277 |  |
| 6903 |  |

When you subtract $I$, the difference is always ONE LESS than that number.

203-l= $\qquad$ I less than 203

1020-I= $\qquad$ I less than 1020
$34||-|=$ $\qquad$ $\uparrow$
| less than $341 \mid$
$\qquad$
$\qquad$ I less than 398
287-|= $\qquad$

76-|= $\qquad$
$\qquad$

## Subtracting One With Part-Part-Wholes

Let's show one less using part-part-whole.
Example: 310-I=


Find the missing part for each part-part-whole.


| ONE LESS |  |  |
| :---: | :---: | :---: |
| MISSING UNKNOWNS |  |  |
|  |  |  |
| Find the missing unknown for each equation. |  |  |
| $1232-\square=1231$ | 4553-1 = | $7-1=4008$ |
| $861-\square=860$ | - $1=2430$ | 236-1 = |
| $452-\square=451$ | 2626- | - $1=5668$ |
| -I $=557$ | \|258-1 = | $\square-1=1361$ |
| $799-\square=798$ | $\square-1=265$ | 733-1 = |
| Write 5 equations that have a difference between 0 and 500 | Write 5 equations that have a difference between 501 and 1000 | $\begin{aligned} & \text { Write } 5 \text { equations that have a } \\ & \text { difference between } 1001 \text { and } \\ & 9999 . \end{aligned}$ |
| -I- | -- | [-l= |
| -- | - $-=$ | --\|= |
| $-1=$ | - $-1=$ | - $-1=$ |
| -l= | ___- ${ }^{-1}$ | -_- $=$ |
| -\|= | - $-1=$ | --1= |

# Let's Extend "One Less" 

We can use "one less" for other equations. Take a look at the equations below:


What do you notice about the equations in the box above?

Fill in the blanks:


## Extending the <br> 'One Less' Facts

When we see an equation like this: 70-10= $\qquad$ , we can think to ourselves, "I know that $7-1=6$, so $70-10=60$."

When we see an equation like this: 7000-1000= $\qquad$ , we can think to ourselves, "I know that $7-1=6$, so $7000-1000=6000$."

Write the difference for each equation. If the difference is less than $५ 999$, shade the box purple. If the difference is greater than $Ч १ १ 9$, shade the box yellow:

| $300-100=$ | $1000-1000=$ | 2000-1000= |
| :---: | :---: | :---: |
| $90-10=$ | 9000-1000= | $40-10=$ |
| 600-100= | 5000-1000= | 3000-1000= |
| $20-10=$ | 800-100= | 500-100= |
| 6000-1000= | 9-1= | 7000-1000= |
| 200-100= | 8000-1000= | $900-100=$ |

## MORE, LESS, SAME



Write 3 equations that have a difference LESS than 5000.


Write 3 equations that have a difference GREATER than 5000.


## Jor the Jeacher

## Level \#3: Two Less

The following section will provide practice and reinforcement of "two less" concepts.

The level begins with a brief review of subtracting 2 from a number between 0 and 9999.

After the review, students will learn to use their knowledge of subtract 2 concepts to subtract larger numbers in the 10 's, 100's, and 1000's.

For example, students can relate the following 3 equations:


249-2 means 2 less than 249 .
Say, "249."
$\longrightarrow$ Count backwards.


Find two less.

$$
81-\cdots=\quad 1010-\cdots=
$$

$3226-\cdots=$

$$
189-\cdots=\quad 8886-\cdots=
$$

$$
556-\cdots=
$$

$$
7443-\cdots=
$$

$$
46-\cdots=
$$

$$
9346-\cdots=
$$

$$
4408-\cdots=
$$

$$
6192-\cdots=
$$

$$
97-\cdots=
$$

$$
5000-\cdots=
$$

$$
344-\cdots=
$$

Rhianna has started a countdown until the holidays. When she started the countdown, there were 75 days left. Now two more days have passed by. Now how many days are left until holidays begin?

TWO LESS


When you subtract 2 , the difference is always TWO LESS than that number.
||34-2= $\qquad$

$$
2031-2=\frac{}{\uparrow} 2 \text { less than } 2031
$$

## 4000-2=



783-2= $\qquad$
$508-2=$


1097-2=
2 less than 1097

## Let's Use "Two Less"

We can use "TWO LESS" for other equations. Take a look at the equations below:

$$
\begin{aligned}
& \text { 4-2=2 } \longrightarrow 40-20=20 \longrightarrow 400-200=200 \longrightarrow 4000-2000=2000 \\
& \text { 7-2 } 2 \longrightarrow 70-20=50 \longrightarrow 7000-2000=5000 \\
& \text { 9-2 } \longrightarrow 7 \longrightarrow 90-20=70 \longrightarrow 900 \longrightarrow 9000-2000=7000
\end{aligned}
$$

What do you notice about the equations in the box above?

Fill in the blanks:


## Extending the Two Less Facts

When we see an equation like this: $80-20=$ $\qquad$ , we can think to ourselves, "I know that $8-2=6$, so $80-20=60$."

When we see an equation like this: $8000-2000=$ $\qquad$ , we can think to ourselves, "I know that 8-2=6, so 8000-2000=6000."

Write the difference for each equation. If the difference is less than $५ १ 99$, shade the box light blue. If the difference is greater than ५१११, shade the box red.

| $100-2=$ | 4000-2000= | 700-200= |
| :---: | :---: | :---: |
| 600-200= | $300-200=$ | 60-2= |
| 5619-2= | 3000-2000= | 8000-2000= |
| 500-200= | 6000-2000= | 800-200= |
| 78-2= | 400-200= | 2000-2000= |
| 5000-2000= | 900-200= | 225-2= |

# PUTTING IT ALL TOGETHER Graph It! 

Find the difference for each equation. Write each equation on the graph in a space above its difference.

| $502-2$ | $5000-2000$ | $3001-1$ | $4000-1000$ |
| :---: | :---: | :---: | :---: |
| $4570-2$ | $4568-0$ | $600-100$ | $3002-2$ |
| $9000-2000$ | $8000-1000$ | $700-200$ | $274-1$ |
| $273-0$ | $501-1$ | $7002-2$ | $275-2$ |


|  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
| 273 | 500 | 3000 | 4568 | 7000 |
| Difference |  |  |  |  |

## Jor the Jeacher

## Level \#4: Counting Back

Level 4 is all about the subtraction strategy Counting Back. Students have actually already learned this strategy in the One Less and Two Less levels, but now we are going to expand on it.

Counting back is typically one of the very first strategies that students learn for subtraction. It involves starting with the bigger number (the minuend), and counting backwards. For example, in the equation 25-3, we think: "25.....24, 23, 22."

It is important to note that counting back is ONLY an effective strategy when subtracting 1, 2, 3, or 4 from a number. Beyond that it gets too confusing, and it is too easy to make errors. For example, imagine counting back for 19-12? Not a good idea!

As I already mentioned, students have already been working with this strategy, even if they haven't yet realized it. In this level, we will work with this strategy for subtracting subtrahends of $1,2,3$, and 4 from a minuend up to 9999.

At the end of this level students will integrate the concept of "counting back" with the previous strategies that have been learned.

## COUNTING BACK

When you count back, you start with the BIG number and count back.
EXAMPLE: $10-3=7$

Say, "0." $\qquad$ Count backwards. $\qquad$


Find the difference.

$$
\begin{aligned}
& 170-\bullet^{\circ}= \\
& 1092-\square= \\
& 2133-\cdots= \\
& 278-\square= \\
& 4994-\boxed{\bullet} \\
& 884-\boxed{\bullet^{\circ}}= \\
& 2000-\cdots= \\
& 1000-\because:= \\
& 124-\cdots= \\
& 652-\because: \\
& 56-\cdots= \\
& 89-\because:= \\
& 1455-\cdots= \\
& 301-. \bullet^{\circ}= \\
& 90-\cdots=
\end{aligned}
$$

Thomas thought that he had $\$ 549$ dollars, but he actually had $\$ 4$ less than that. How much money did he have?

# COUNTING BACK ON A 

You can use a blank number line to help you count back. Let's try it for 245-3.


Then make 3 jumps back, counting as you go.
Use the number lines to count back.


Start with 2300.


Start with 755.
755-3


Choose

## Best



For the Job

Count back to solve each equation. Use the tool that works the best - dot patterns or an empty number line.

Dot Patterns


Number Line

8246-3= $\qquad$ 2365-2= $\qquad$

157-3= $\qquad$

7539-|= $\qquad$
$3555-4=$ $\qquad$

1902-4= $\qquad$
$\qquad$
$2984-4=$ $\qquad$
$279-2=$ $\qquad$
$5674-2=$ $\qquad$
$500-2=$ $\qquad$

476-3= $\qquad$

Which tool do you like using the best?

## MORE, LESS, SAME

$>$ more than
< less than
= same

$5467-0 \square$ 6000-1000


Write 3 equations that have a difference LESS than 5000.


Write 3 equations that have a difference GREATER than 500 .


## Bonus Ictivity- Jeacher enstructions

Include this activity at the end of Level 4 in your Subtraction Station.

This activity integrates the strategies that students have already learned: - 0, -1, -2, and Counting Back.

## Overview:

In this Bonus Activity, students choose a task card, subtract the numbers, and record the equations in their notebook or on the recording sheet.

## Preparation:

- Print and laminate task cards.
- Make copies of recording sheets (you may wish to have students record the answers in their notebooks instead).
- To set these up, I typically cut out the title and directions and paste them on either side of a piece of cereal box cardboard. I store the center pieces in small re-sealable bags, and then keep everything in a large re-sealable bag. I've made a video showing how I make and store the center pieces that you can watch by clicking here:
https://www.youtube.com/watch?v=Z4EKxxCYnjo\&feature=youtu.be
fot air Balloon sultraction math Center



## fot air Balloon subtraction Math Center

## Directions

Choose an equation card. Read the equation and find the matching difference. Place the two cards together and record the equations on the recording sheet.



## 3546-0



## 2745-2745



9080-1


# $400-100$ 




## 3000-1000



## 40-20



# 6000-2000 



# 9000-2000 



## 2462-2



## 4500-3



|  |  |
| :---: | :---: |
|  | $\overbrace{3}{ }^{0}$ |
|  | $\begin{array}{r} 9079 \\ 3 \\ 3 \end{array}$ |
|  |  |



| $\begin{array}{r} 7000 \\ 3 \\ 8 \end{array}$ |  |
| :---: | :---: |
|  | $\begin{array}{r} 4354 \\ r_{3} 3 \\ > \end{array}$ |
|  |  |
|  |  |

## Recording Sheet

Record the minuend, subtrahend, and difference for each equation.

| Minuend | Subtrahend | Difference |
| :--- | :--- | :--- |
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| Minuend | Subtrahend | Difference |
| :--- | :--- | :--- |
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## Jor the Jeacher

## Level \#5: Counting Up

In Level 5, we learn about the Counting Up strategy. Counting Up is actually closely related to the Counting Back strategy that students learned in the last level.

Counting Up can be used when subtracting two numbers that are close together. Ideally the difference should be no larger than 4. For example, counting up would work well for an equation like 12-9, but not for an equation like 12-4.

To count up, we begin with the SMALLER number (the subtrahend) and count up towards the minuend. For example, for the equation 12-9, we can start with 9 and then count up, "10, 11, 12." We counted up 3 numbers, so the answer is 3 .

At the end of this level students will integrate the concept of "counting up" with the previous strategies that have been learned.

## COUNTING UP

When you count up, you start with the SMALL number and count up.
EXAMPLE: $10-7=$

Say, "7."
 Count up.


We counted up by 3
numbers, so the answer is 3 !

Start with the smaller, underlined number and count up. As you count, draw dots in the square.


8609-8606=




1000-999=



Write 4 equations that you could use the counting up strategy for.
$\qquad$
$\qquad$
$\qquad$
$\qquad$
$\qquad$

## COUNTING UP ON A Number Line

You can use a blank number line to help you count up. Let's try it for 86-83.


Then make 3 jumps up, counting as you go.
Use the number lines to count up.
Start with 474.
477-474
The difference is $\qquad$ -


Start with 595.


Start with 1328.


Start with 2776.

$\qquad$

# CHOOSE THE BEST STRATEGY: 

## COUNT UP OR COUNT BACK?

Example: 23-4
To count back, we start with 23 and count back like this:
$23 \ldots 22,21,20,19$

To count up, we start with 4 and count up like this:
$4 . .5,6,7,8,9,10,11,12,13,14,15$,
$16,17,18,19,20,21,22,23$

Which works better? counting back

Now it's your turn. Which strategy works best?

4659-4656= counting back counting up

Why? $\qquad$

## ЧЧ9-2=

counting back counting up
$\qquad$

583-580= counting back counting up

Why? $\qquad$

## 2100-4=

counting back counting up

Why? $\qquad$

# LET'S PRACTICE <br> COUNTING UP! 

Use the counting up strategy to solve each equation. If it helps you to use a number line, use the one below. If the difference is an ODD number, shade the box green. If the difference is an EVEN number, shade the box yellow.

$9000-8999=$


678-677=


4656-4653= $\qquad$
$687-686=$


2599-2596=
$\qquad$
$533-530=\ldots$

# "Putting It All Together" Cut-andPaste 

Use any strategy that you have learned to complete each equation.


## Jor the Jeacher

## Level \#6: Think Addition

Level 6 is is one of the most important levels in the Subtraction Station so far. In this level, students will learn about the very important inverse relationship between addition and subtraction. Students will use known addition facts to solve subtraction equations, and learn about fact families.

Thinking Addition is a very effective strategy that students are going to use forever. Because subtraction is sometimes a difficult concept to master, having this strategy to fall back on is crucial.

At the end of this level students will integrate the concept of "thinking addition" with the previous strategies that have been learned.

## THINKING ADDIITON

Did you know that subtraction is the opposite of addition? Take a look!


We can use this addition equation...
$32-7=25$
...to make this subtraction equation.

Do you see how the same numbers are used?

Write the subtraction equation that is the opposite of each addition equation:


Draw a line to match each addition equation with its opposite subtraction equation:

| $346+1567=1913$ | $480-230=250$ |
| :--- | :--- |
| $2000+1300=3300$ | $5030-320=4710$ |
| $250+230=480$ | $1913-1567=346$ |
| $450+457=907$ | $3300-1300=2000$ |
| $4710+320=5030$ | $5509-1000=4509$ |
| $4509+1000=5509$ | $907-457=450$ |

# Let's Use NUMBER BONDS 

We can use a number bond to write two addition equations and two related subtraction equations. Take a look!

$320-60=260$
$320-260=60$

Now it's your turn!


More


NUMBER BONDS
Write two addition equations and two subtraction equations for each number bond.


Create your own number bonds!


OShelley Gray

## THINK ABOUT IT

Now it's your turn!
$1000-500=$

## THINK:

When you see a subtraction equation, you can THINK ADDITION.
$20+10$ makes 30 , so
$\square$

1456-56=__ THINK: What can I add to 56 to make 1456 ?

8575-8000= $\qquad$ $\longleftarrow$ THINK: What can I add to 8000 to make 8575 ?

| $2500-300=\ldots$ |  | $250-50=$ <br> $5724-4000=\ldots$ <br> $9800-800=\ldots$ |
| :---: | :---: | :---: |
| $1000-500=\ldots$ | $300-200=$ |  |
| $579-9=\ldots$ | $600-550=$ |  |

# THINK ABOUT IT 

Use the "think addition" strategy. If the difference is EVEN, shade the pencil yellow. If the difference is ODD, shade the pencil green.


Write 3 different subtraction equations with a difference of 2300 .

Write 3 different subtraction equations with a difference of 860 .
$\qquad$ $-$ $\qquad$
$\qquad$ - $\qquad$ $=$ $\qquad$
$\qquad$ - $\qquad$
$\qquad$
$\qquad$ - $\qquad$ $=$ $\qquad$
$\qquad$
$\qquad$ - $\qquad$ $=$

## PUTTING IT ALL TOGETHER

Use any strategy that you have learned to solve the equations.
$500-100=$


Which two equations were the hardest to solve? Shade those boxes red. Which two equations were the easiest to solve? Shade those boxes green.

## Jor the Jeacher

## Level \#T: Using Doubles

The "Using Doubles" strategy involves using what you know about the doubles addition facts to solve subtraction equations. For example, if you know that $4+4=8$, then the equation 8-4 becomes easier to solve. Students can think, "I know that $4+4=8$, so $8-4=4$."

In this level, students will begin by reviewing the addition doubles facts. If your students are not yet comfortable with the addition doubles, this needs to be practiced and mastered.

Once the addition review is complete, students will move into the using doubles strategy.

After this level's brief review of doubles to 12, students will use their knowledge in order to extend the doubles equations to larger numbers in the 10 's, 100's, and 1000's.

For example, students can relate the following 3 equations:


This gets more difficult with equations such as the following (students will not work with equations that have a minuend greater than 10,000 , such as $12,000-6000$ ):


At the end of this level students will integrate the concept of "using doubles" with the previous strategies that have been learned.

# USING DOUBLES 

Let's review the addition doubles facts!


Use a doubles fact to complete each equation.

$\qquad$ $+$ $\qquad$ $=16$


## USING DOUBLES

Did you know that you can use the addition doubles when you subtract? Take a look!


Use the doubles facts to solve these subtraction equations:


Lii has 18 pies to sell at the bake sale. So far she has sold half of them. How many more pies does she have to sell?

Show your work.

# Let's Extend the Doubles 

We can extend the "USING DOUBLES" strategy for other equations. Take a look at the equations below:
$6-3=3 \longrightarrow 60-30=30 \longrightarrow 600-300=300 \longrightarrow 800-3000=3000$
$8-4=4 \longrightarrow 80-40=40 \longrightarrow 200-4000=4000$
$2-1=1 \longrightarrow 200-100=100 \longrightarrow 10 \longrightarrow 2000-1000=1000$

Explain how knowing your doubles facts could help you with this equation: 8000-4000.

Fill in the blanks:

| $2-\mid=$ | 20-10= | 200-100= | $\longrightarrow 2000-1000=$ |
| :---: | :---: | :---: | :---: |
| $6-3=$ | 60-30 $=$ | 600-300= | $\longrightarrow 6000-3000=$ |
| $22-11=$ | $\longrightarrow$ 220-110= | $\longrightarrow$ 2200-1100= |  |
| 12-6= | $\rightarrow 120-60=$ | $\rightarrow 1200-600=$ |  |
| 4-2= | $\rightarrow 40-20=$ | 400-200= | $\longrightarrow 4000-2000=$ |
| $8-4=$ | $\longrightarrow 80-40=$ | $\rightarrow 800-400=$ | $\longrightarrow 8000-4000=$ |

There are 1400 people at the concert. Half of them leave. Now how many people are left?
Show your work.



EXAMPLE:

$\qquad$

$\qquad$

## PUT IT ALL TOGETHER

Solve the equations. Use the strategy that works best for each one.
$346-4=$

$2145-2145=$

$14-7=$

1400-700=
80-20=

$60-30=$

40-20=

## Jor the Jeacher

## Level \#8: Using Near Doubles

The "Near Doubles" strategy involves using what you know about the doubles plus one and doubles plus two addition facts. Just like the last strategy, this strategy is dependent on an excellent understanding of addition.

If a student is presented with an equation such as $7-3=$ $\qquad$ , he could think, "I know that $3+3$ is 6 , so $4+3$ is one more (7). The difference is $4 . "$

As another example, for the equation 12-5, a student could think: "I know that $5+5=10$, so $7+5$ is 2 more (12). That means that $12-5=7$."

In this level, students will begin by reviewing the "doubles plus one" and "doubles plus two" addition facts. Once the addition review is complete, students will move into the "using near doubles" subtraction strategy.

This strategy will be extended to the 10's, 100's, and 1000's as well.


This gets more difficult with equations such as the following (students will not work with equations that have a sum greater than 10,000, such as $13,000-7000$ ):

Let's review the doubles plus one addition facts!
$\mathrm{l}+2=\ldots$ THINK: "I know that $\mathrm{I}+\mathrm{l}=2$, and then one more is 3 ."
$2+3=$ $\qquad$ $\longleftarrow$
THINK: "I know that 2+2= $\qquad$ , and then one more is $\qquad$ ."
$3+4=\ldots \quad$ THINK: "I know that $3+3=\ldots$, and then one more is $\qquad$ ."
$4+5=\ldots$ THINK: "I know that $4+4=$ $\qquad$ , and then one more is $\qquad$ ."
$5+6=\quad \longleftarrow \quad$ THINK: "I know that $5+5=$ $\qquad$ and then one more is $\qquad$ ."
$6+7=\ldots \quad$ THINK: "I know that $6+6=\ldots$, and then one more is ___.
$7+8=$ $\qquad$ $\longleftarrow$ THINK: "I know that 7+7= $\qquad$ and then one more is $\qquad$ ."


## USING NEAR DOUBLES

## DOUBLES PLUS TWO

Let's review the doubles plus two addition facts!

$5+7=\ldots$ THINK: "I know that $5+5=\ldots$, and then two more is $\qquad$ ."
$6+8=\ldots$ THINK: "I know that 6+6=___, and then two more is $\qquad$ ."
$7+9=$ $\qquad$


THINK: "I know that 7+7= $\qquad$ and then two more is $\qquad$ ."
$8+10=$ $\qquad$ $\leftarrow$ THINK: "I know that 8+8= $\qquad$ , and then two more is $\qquad$ ."
$q_{+} \|=\quad \longleftarrow \quad$ THINK: "I know that $q+q=$ $\qquad$ and then two more is $\qquad$ ."
$10+12=\quad \longleftarrow \quad$ THINK: "I know that $10+10=$ , and then two more is $\qquad$ ."

FACT FAMILIES WITH NEAR DOUBLES

Complete the fact family for each near double.

$\qquad$

$$
|0+1|=2 \mid \quad \quad-\quad-\quad=
$$

$$
6+8=14 \quad-\quad-\ldots
$$

$\qquad$

5+7=12 __-_=

$$
8+9=17 \quad-\quad=
$$

$$
4+5=9 \quad \quad-\quad=
$$

$\qquad$

Now that you know that 9-4=5, could you figure out this equation: 900-400= $\qquad$ ?

Explain how you could figure it out:
$\qquad$
$\qquad$
$\qquad$

# SUBTRACTING WITH NEAR DOUBLES 

Did you know that you can use the doubles plus one and doubles plus two facts when you subtract?


Solve each equation. If the equation is a "using doubles" equation, shade the box yellow. If the equation is a "using near doubles" equation, shade the box green.

| \|1-5 $=$ | $16-8=$ |
| :---: | :---: |
| $20-10=$ | -5 $=$ |
| $13-7=$ | $24-12=$ |

EXTRA CHALLENGE!
Use what you know about the near doubles facts to solve these equations.

| $90-40=\_$ | $400-100=\ldots$ | $600-200=\ldots$ | $700-300=$ |
| :--- | :--- | :--- | :--- |
| $800-300=\_$ | $500-200=\_$ | $300-100=\ldots$ | $40-10=$ |
| $50-20=\_$ | $100-40=\ldots$ | $70-30=\ldots$ | $60-20=$ |

## Let's Extend the Near Doubles

We can extend the "USING NEAR DOUBLES" strategy for other equations. Take a look at the equations below:
9-4 $=5 \longrightarrow 90-40=50 \longrightarrow 900-400=500 \longrightarrow 9000-4000=5000$
$8-3=5 \longrightarrow 80-30=50 \longrightarrow 700-300=500 \longrightarrow 700-3000=5000$
$7-3=4 \longrightarrow 7000=400 \longrightarrow 40 \longrightarrow 9000=4000$

Explain how knowing your 'near doubles' facts could help you with this equation: 7000-3000.

Fill in the blanks:

| 7-4 | $\rightarrow 70-40=$ | $\rightarrow 700-400=$ | $\longrightarrow 7000-4000=$ |
| :---: | :---: | :---: | :---: |
| $8-3=$ | 80-30= | $\rightarrow 800-300=$ | $\rightarrow 8000-3000=$ |
| $9-4=$ | $\rightarrow 90-40=$ | $\rightarrow 900-400=$ | $\rightarrow 9000-4000=$ |
| 5-2= | $\rightarrow 50-20=$ | $\rightarrow 500-200=$ | $\rightarrow 5000-2000=$ |

The restaurant has enough meat to make 700 hamburgers. This week they sold 300 hamburgers. How many more hamburgers can they make?


## PUTTING IT ALL TOGETHER Equation Hunt

Subtract any two numbers that are touching. Remember to use the big number first. Shade them in and write the equation (with the difference) in the box.

| 5 | 400 | 2526 | 12 | 100 | 60 | 20 | 20 | 4459 | 30 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 148 | 200 | 1 | 5 | 900 | 12 | 3245 | 3245 | 4 | 10 |
| 0 | 5000 | 2000 | 70 | 100 | 6 | 148 | 321 | 320 | 30 |
| 1000 | 500 | 100 | 20 | 14 | 7000 | 14 | 3359 | 1 | 70 |
| 3000 | 700 | 300 | 3333 | 0 | 2000 | 7 | 21 | 10 | 8000 |
| 2000 | 40 | 10 | 300 | 100 | 6000 | 1000 | 60 | 20 | 1000 |

148-0=148
$6000-1000=5000$
-
$=$

- $\qquad$
$=$
$=$ $\qquad$
$\qquad$ - $\qquad$ $=$
$\qquad$
$=$ $\qquad$
$\qquad$ - $\qquad$ $=$ $\square$
$\qquad$
$\qquad$ -
$-$
$=$ $\qquad$
$\qquad$ $-$ $\qquad$ $=$ $\qquad$
$\qquad$
$-$ $\qquad$ - $\qquad$ $=$ $\qquad$
$\qquad$ - $\qquad$ $=$
$\qquad$
- $\qquad$
- $\qquad$
$\qquad$


## Bonus Ictivity- Jeacher enstructions

Include this activity at the end of Level 8 in your Subtraction Station.

This activity integrates the strategies that students have already learned up to this point.

## Overview:

In this Bonus Activity, students choose a task card, subtract the numbers, and record the equations in their notebook or on the recording sheet.

## Preparation:

- Print and laminate task cards.
- Make copies of recording sheets (you may wish to have students record the answers in their notebooks instead).
- To set these up, I typically cut out the title and directions and paste them on either side of a piece of cereal box cardboard. I store the center pieces in small re-sealable bags, and then keep everything in a large re-sealable bag. I've made a video showing how I make and store the center pieces that you can watch by clicking here:
https://www.youtube.com/watch?v=Z4EKxxCYnjo\&feature=youtu.be


## Beach Day subtraction Math Center

# Beach Day <br> Subtraction 

Math Center


## Beach Day subtraction Math Center

## Directions

Choose an equation card. Read the equation and find the matching difference. Place the two cards together and record the equations on the recording sheet.





# 900-500 




## 400



## 600




3



800

## 400



9
400


## 40



## Recording Sheet

Record the minuend, subtrahend, and difference for each equation.

| Minuend | Subtrahend | Difference | Minuend | Subtrahend | Difference |
| :--- | :--- | :--- | :--- | :--- | :--- |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
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## Jor the Jeacher

## *trategy \# 9 : Using Combinations of 10 and Multiples of 10

In this level, students will begin by reviewing the making 10 addition facts, and expand on that by practicing facts that can be added to make a multiple of 10 . Then they will move on to subtraction, relating the subtraction facts to what they already know about addition.

For example, for the equation 10-6= $\qquad$ , students can think, "I know that $4+6=10$, so the difference is 4 ." For an equation such as $70-8=$ $\qquad$ , students can think, "I know that $62+8=70$, so $70-8=62$."

At the end of this level students will integrate the concept of "using combinations of 10 and multiples of $10^{\prime \prime}$ with the previous strategies that have been learned.


Spin and
to make multiples of 10

Spin a number. Write it in the first box. Then solve the equation.

EXAMPLE:

$8+2=10$
$\square+\square=10$


MAKING

Complete each equation with any numbers.

$$
\left[\begin{array}{l}
10-\ldots= \\
10-\ldots= \\
10-\ldots= \\
10-\ldots= \\
10-\ldots=
\end{array}\right.
$$

$$
40-
$$

$\qquad$

$$
40-
$$

$\qquad$

$$
40-
$$

$$
40-
$$

$\qquad$

$$
40-
$$

$\qquad$

70-__ $=$ $\qquad$
70- $=$ $\qquad$
70-___ $\qquad$
70-_ $=$ $\qquad$
70-__ $=$
$20-\ldots=\ldots$
$20-\ldots=-$
$20-\ldots=$
$20-\ldots=-$
$20-\ldots=$
$30-\ldots=\ldots$
$30-\ldots=\_$
$30-\ldots=$
$30-\ldots=$
$30-\ldots=$
$50-\ldots=$
$50-\ldots=$
$50-\ldots=$
$50-\ldots=$
$50-\ldots=$
$60-\ldots=\_$
$60-\ldots=$
$60-\ldots=$
$60-\ldots=$
$60-\ldots=$
$80-\ldots=\ldots$
$80-\ldots=\ldots$
$80-\ldots=\ldots$
$80-\ldots=$
$80-\ldots=$


## PROBLEM SOLVING WITH MULTIPLES OF 10

Mr. Williams asks his 30 students if they are happy or sad. 28 of them say that they are happy, and the rest are sad. How many students are sad?

Show your work:

The construction crew is fixing the sidewalks. There is a total of 50 meters of sidewalk to fix. So far they have fixed 9 meters. How many meters of sidewalk are left?

Show your work:


There were 40 cans of tomato sauce on the shelf, but 6 of them have been sold already. How many cans of tomato sauce are left?

Show your work:
 TEN AND MULTIPLES OF IO

Use what you know about combinations of 10 and multiples of 10 to solve these equations. If the difference is EVEN, shade the box green. If the difference is ODD, shade the box red.

$40-5=$


$30-4=$

50-7=

$30-4=$

$10-2=$

# MORE, LESS, SAME 

Write 3 equations that have a difference between 245 and 745 .
$\qquad$
$\qquad$
$\qquad$
$\qquad$

Write 3 equations that have a difference between 1000 and 2000.
$\square$

## Jor the Jeacher

## \&trategy \#|0: Using Combinations

## of 100 and 1000

In this level, students will begin by reviewing the making 100 and 1000 addition facts. Then they will move on to subtraction, relating the subtraction facts to what they already know about addition.

For example, for the equation $100-60=$ $\qquad$ , students can think, "I know that $40+60=100$, so the difference is 40 ." For an equation such as $1000-700=$ $\qquad$ . students can think, "I know that $300+700=1000$, so the answer is 300 ."

At the end of this level students will integrate this strategy with the previous strategies that have been learned.

## Spin and Solve

Spin a number. Write it in the first box. Then solve the equation.



Complete each equation with any numbers. Be sure to challenge yourself! Put a star beside the equations that were extra challenging to solve.
$100-$ $\qquad$
$100-$ $\qquad$
$100-$ $\qquad$
$100-$ $\qquad$
100- $=$ $\qquad$
$100-$ $\qquad$
100-_ $=$ $\qquad$
100-_ $=$ $\qquad$
$100_{-}=$ $\qquad$
100- $=$ $\qquad$
$1000-$ $\qquad$
$1000-$ $\qquad$
$1000-$ $\qquad$
$1000-$ $\qquad$
$1000-$ $\qquad$
$\qquad$
$1000-$ $\qquad$
1000-_ $=$ $\qquad$
$1000-$ $\qquad$
$1000-$ $\qquad$

Solve the problem:
1000 people are expected to come to the craft sale. So far 400 people have come. How many more people are expected to show up?

Show your work:

## USING COMBINATIONS OF 100 AND 1000

## PART-PART-WHOLE WITH MUTIPLES OF 100 AND 1000

Complete each part-part-whole representation.


Fill in both parts. What do you think each part represents?
$\square$

|  |  |
| :--- | :--- |
| 1000 |  |

Create two of your own part-part-whole representations.
$\square$


# PUTTING IT ALL TOGETHER CROSS-NUMBER PUZZLE 



Across:

| I. 24-12 | $15.1000-400$ |
| :--- | :--- |
| 4. $100-60$ | $16.4000-2000$ |
| $5.6592-0$ | $17.778-100$ |
| 7. $9837-3$ |  |
| 9. $1292-2$ |  |
| 12. 6000-3000 |  |
| 13. $453-1$ |  |

Down:
2. 2360-4
3. 3432-3
6. 800-500
18. 130-60
8. 800-400

I0. 2529-4
II. 9000-1000
13. 4468-2

## Jor the Jeacher

## strategy \#\#: BACK to a Friendly <br> Number

In Math, the number 10 is so important. We use the number 10 to understand other numbers, as well as for a baseline when we are performing operations such as addition and subtraction. This strategy is one of these instances where we use 10 .

In this level of the Subtraction Station, we are going to begin by focusing on decomposing numbers that lead to the number 10. For example, in the equation 15-6, we can think of the 6 as a 5 and a 1 . So first we do $15-5$ to make a 10 , and then subtract one more to make 9 .

After working with 10, students will extend this learning to decompose to get to any friendly number - for example: 20,30, 40, or 100.

For example, for 24-7, students could think, "24-4=20, and then -3 more makes 17." This will introduce students to the fact that this same strategy can be extended to any set of numbers.
***This is a difficult concept, and I encourage you to do several small group minilessons with it. It is also a great idea to use manipulatives such as base 10 blocks to illustrate how we decompose the second number.**

At the end of this level students will integrate the concept of "back to a friendly number" with the previous strategies that have been learned.

## Getting To A Friendly Number

Friendly numbers are numbers that are easy to work with, such as $10,20,30$, or 40 . What do we have to take away to complete each equation and get to a friendly number?
EXAMPLE:
$34-\ldots=30 \longrightarrow 34-4=30$

Now it's your turn!


Draw a picture to represent this equation:

$$
47-7=40
$$

Draw a picture to represent this equation: ||1-14=100

## Learning to Decompose

Now let's use what we know about getting back to a friendly number to subtract.


Now it's your turn!






## BACK TO A FRIENDLY NUMBER

## Let's Keep Decomposing!

Let's decompose using numbers instead of blocks!
EXAMPLE:

Now it's your turn!


## Practice Decomposing

Practice decomposing the second number (the subtrahend) to solve these equations. Use the empty space to show your work.


Explain how you would solve this equation by decomposing the 5 .
43-5=

Do you think you could use this same strategy to solve this equation? 102-5= How?

## IOO Is A Friendly Number

The number 100 is a FRIENDLY NUMBER because it is easy to work with.


Let's use the "back to a friendly number" strategy to get back to 100 !

|  | $100-4=$ $\qquad$ <br> Take away 4 more | 102-6= |
| :---: | :---: | :---: |
|  | $100-2=$ $\qquad$ <br> Take away 2 more | $107-9=$ |
|  | $100-3=$ $\qquad$ <br> Take aw | $104-7=$ |

## BACK TO A FRIENDLY NUMBER

## Practice Getting Back To 100

Now let's keep decomposing to get to 100 !


BONUS!
You can use this same strategy for so many different equations. Just go back to the nearest "friendly number" and then subtract the rest. Try it!


$$
\begin{aligned}
& \text { Friendly Number } \\
& \text { CHALLENGE }
\end{aligned}
$$

Find the difference for each equation. Use the "back to a friendly number" strategy.


Explain how you would solve this equation by decomposing the 7 .

## Putting It All Together: Bubble Gum Subtraction



## Jor the Jeacher

## Strategy \#|2: UP to a Friendly <br> Number

The strategy "Up to a Friendly Number" is closely related to the previous strategy that we learned - "Back to a Friendly Number." The difference is that in this case we count up instead of back.

For example, for the equation 34-28, we will start with the number 28 . First we'll count up 2 to get to 30 , and then 4 more to get to 34.2 and 4 makes 6 , so the difference is 6 .

Here's another example: 301-96. We start at 96 and first count up by 4 to get to 100. Then we'll add another 201 to get to $301.4+201$ is 205 , so the difference is 205.
***This is a difficult concept, and I encourage you to do several small group minilessons with it.**

At the end of this level students will integrate the concept of "up to a friendly number" with the previous strategies that have been learned.

## Going UP To A Friendly Number

Let's practice going UP to the nearest friendly number. Fill in the blank to complete each equation.

EXAMPLE:

$$
22^{*} \text { _ }=30 \longrightarrow 22 * 8=30
$$

Now it's your turn!


Now complete each equation by adding something to make the nearest friendly number.


## Going UP To Subtract

Let's learn how we can go up to a friendly number to subtract.
EXAMPLE: 24-I8= $\rightarrow \mathbf{8 *} \square_{\square}=20 \rightarrow 20 *$ 믐 $=24$ We start with the smaller
number. First let's get to the
friendly number 20 . We need
to add 2 to get to 20 .
 to get up to 24 .

Altogether, we added 6, so the answer is 6 .

24-18=6

Step 1: Go up to a friendly number.
Step 2: Add the rest.

| $55-42 \longrightarrow 42+\ldots=50 \longrightarrow 50+\ldots$ | $=55$ |
| :--- | :--- |
| Altogether, $I$ added $\ldots$ | $55-42=\ldots$ |

$$
62-26 \longrightarrow 26+\ldots=30 \longrightarrow 30+\ldots=62
$$

Altogether, I added $\qquad$ .


## UP TO A FRIENDLY NUMBER

## Let's Keep Practicing

Use the up to a friendly number strategy to solve each equation.



$$
172-165 \longrightarrow 165+\ldots=170 \longrightarrow 170+\ldots=172
$$

172-165=
Altogether, I added $\qquad$ .
$304-292 \longrightarrow 292+\ldots=300 \longrightarrow 300+\ldots=304$
$304-292=$
Altogether, I added $\qquad$ .

## On Your Own!

Now use the up to a friendly number strategy all by yourself! Use the extra space in each box to do your work if you need to.


Explain how you would solve this equation using the up to a friendly number strategy. 104-96=

# RESTAURANT <br> PROBLEM SOLVING 

Use the "Up To A Friendly Number" strategy to solve each problem.
The restaurant has enough food to feed 210 people this weekend. So far, $19 \|$ people have eaten there. How many more people can eat at the restaurant this weekend?

Show your work:


There are 54 steaks and 160 chicken pieces in the fridge. So far, 42 people have ordered steak. How many steaks are left?

Show your work:

Jim is 37 years old. He has been a server at the restaurant for 19 years. How old was Jim when he started working at the restaurant?

Show your work:


## Bonus Ictivity- Jeacher enstructions

Include this activity at the end of Level 12 in your Subtraction Station.

This activity integrates the strategies that students have already learned up to this point.

## Overview:

In this Bonus Activity, students choose a task card, subtract the numbers, and record the equations in their notebook or on the recording sheet.

## Preparation:

- Print and laminate task cards.
- Make copies of recording sheets (you may wish to have students record the answers in their notebooks instead).
- To set these up, I typically cut out the title and directions and paste them on either side of a piece of cereal box cardboard. I store the center pieces in small re-sealable bags, and then keep everything in a large re-sealable bag. I've made a video showing how I make and store the center pieces that you can watch by clicking here:
https://www.youtube.com/watch?v=Z4EKxxCYnjo\&feature=youtu.be


# Home Run <br> Subtraction 

## Math Center



## ffome Run subtraction Math Center

## Directions

Choose an equation card. Read the equation and find the matching difference. Place the two cards together and record the equations on the recording sheet.







## ©Shelley Gray




## Jor the Jeacher

## Level \#3: Subtracting Multiples of

 10 and 100In this level, students will practice subtracting multiples of 10 and 100 from numbers up to 9999. Students will use place value understanding when learning this concept.

At the end of this level students will integrate this strategy with the previous strategies that have been learned.

## SUBTRACT MULTIPLES OF 10 AND 100

## SUBTRACTING MULTIPLES OF IO

## EXAMPLE:



# Subtracting Multiples of Ten ON A PLACE VALUE CHART 

| 代 | Tens | Ones | -30= | Tens | Ones |  | H | T | 0 | $-40=$ | H | T | 0 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\sim_{1}$ | 6 | 7 |  | 3 | 7 |  | 2 | 5 | 3 |  | 2 | 1 | 3 |
| 1 | This shows 6 groups of 10 and 7 ones. |  |  | When we subtract 30 , we just subtract 3 groups of 10 . |  |  | This shows 2 groups of 100, 5 groups of 10 , and 3 ones. |  |  |  | When we subtract 40 , we just subtract 4 groups of 10 . |  |  |
| $\stackrel{4}{4}$ |  |  |  |  |  |  |  |  |  |  |  |  |  |
| $\cdots$ |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 代 |  |  |  |  |  |  |  |  |  |  |  |  |  |

Complete each equation.


## Subtracting Multiples of 100 ON A PLACE VALUE CHART

 $13-C$Now that we know how to use place value to subtract multiples of $I O$ ，we can subtract multiples of 100 in the same way！

| 寽 | Th | H | T | 0 | －200＝ | Th | H | T | 0 |  | Th | H | T | 0 | $-400=$ | Th | H | T | 0 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 发 |  | 8 | 4 | 2 |  |  | 6 | 4 | 2 |  | q | 7 | 5 | 1 |  | 9 | 3 | 5 | 1 |
| 㞥 |  |  |  |  |  |  |  |  |  |  |  |  |  |  | ct 400, <br> oups of |  | sub |  |  |

Complete each equation．



| Th | H | T | 0 |
| :--- | :--- | :--- | :--- |
| 7 | 1 | 7 | 3 |


$7173-100=$

Solve these equations：
5361－300＝ $\qquad$ 8477－100＝ $\qquad$ $1880-400=$ $\qquad$
Be carefull $)$

1415－200＝ $\qquad$ 490－300＝ $\qquad$
883－700＝ $\qquad$ $3900-400=$
1435－200＝
288－200＝ $\qquad$
2743－200＝ $\qquad$
$2134-200=$
$3300-500=$ 1802－900＝
4462－300＝ $\qquad$ 749－400＝


## PUTTING IT ALL TOGETHER

Fill in the missing number for each number bond.


## Jor the Jeacher

## Level \#|4: Subtract 7, 8, and 9

Now that your students have learned to subtract 10 and multiples of 10 , they are going to build on that knowledge to learn how to subtract 7, 8, and 9. This is a difficult concept, because there are two steps involved. It is important to understand that some of your students are going to need extra mini-lessons and one-on-one instruction to fully understand this strategy.

In this level, students are going to learn to subtract 9 by first subtracting 10, and then adding 1 to the difference. Similarly, to subtract 8, they will first subtract 10 and then add 2 to the difference. To subtract 7 , they first subtract 10 and then add 3 to the difference. This will help them learn how to manipulate numbers (one of the most important aspects of mental math). You may even notice that some of your students begin to manipulate numbers in other instances as well!

## Example: $\stackrel{\Psi-}{ } \mathrm{q}=\quad$ Then we add one more to make 5 . <br> First we do $14-10=4$. <br> So, $14-q=5$

## Example: 12-8= <br> $\qquad$ <br> Then we add two more to make 4. <br> First we do $12-10=2$. <br> So, $12-8=4$

## - Note from shelley

You might have heard of a trick called "Magic 9" for subtracting 9 from a 'teen' number. When you have an equation such as 17-9, you can add the digits together in the '17' and that will be the difference: 8! For 19-9, add $1+9$ to make a difference of 10 . For $12-9$, add $1+2$ to get a difference of 3 ! Pretty neat, right?

I agree that this is a neat trick; however, for the purposes of this Math Station I have NOT included it. I want your students (especially at this young age) to gain a really great number sense understanding, so I have included base ten blocks and number lines to teach the -9 facts. If you decide to introduce this trick once they have mastered the -9 mental math strategy. I think that is completely acceptable, but please use your best judgment. Be sure that they already have a solid mental math understanding so that you are not creating confusion.

## Subtracting Nine WITH BASE 10 BLOCKS

Let's use base 10 blocks to subtract. We are going to make it easier by subtracting 10 first.
45-9


Now it's your turn!

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## SUBTRACTING 7, 8, AND 9

One more than 76 is $\qquad$ .

Now we have to ADD I to the answer, since we took away one extra.



# Subtracting Nine ON A NUMBER LINE 

## Let's try the same -9 strategy on a number line!

EXAMPLE: 163-9


1 First do 163-10. This is easier!
2 Now add one more (because you took away an extra one in step \#1).

Now it's your turn!
$85-9=$

$344-9=$

$102-9=$


## Subtracting 7 and 8 WITH BASE 10 BLOCKS



Now it's your turn!


Let's try subtracting 7!





# Subtracting 7 and 8 ON A NUMBER LINE 

Let's try subtracting 7 and 8 on a number line!
EXAMPLE: 242-8


1 First do 242-10. This is easier!
2 Now add 2 more (because you took away 2 extra one in step \#I).

Now it's your turn!
$615-8=$

$34-7=$


3네-7=


## SUBTRACTING 7, 8, AND 9

## Use a Number Line TO SUBTRACT 7, 8, and 9

 Subtract 7, 8, and 9 using the number line to help you.

SUBTRACTING 7, 8, AND 9

## PUTTING IT ALL TOGETHER CROSS-NUMBER PUZZLE



Across:

| 2. $6000-600$ | $14.84-77$ |
| :--- | :--- |
| $3.100-30$ | $15.18-9$ |
| $5.43-31$ | $16.40-4$ |
| $6.30-10$ |  |
| $7.7000-4000$ |  |
| 9. $5470-3$ |  |
| 12. 4614-2 |  |

Down:
$\begin{array}{ll}\text { I. } 700-100 & 10.4390-1 \\ 2.7000-2000 & 11.754-7 \\ 4.1000-500 & 13.2468-0 \\ 5.240-240 & \\ 6.253-8 & \\ 7.3881-0 & \\ 8.65-9 & \end{array}$

## Jor the Jeacher

## Level \#15: Subtract 1000 and

 Multiples of 1000In this level students will focus on subtracting 1000 and multiples of 1000 from a number between 1000 and 9999, using place value understanding.

At the end of this level students will integrate the concept of "subtracting 1000" with the previous strategies that have been learned.

## SUBTRACT 1000 AND MULTIPLES OF 1000

## SUBTRACTING MULTIPLES OF IOOO

## EXAMPLE:



This shows 3021. If we subtract 2000, we have 1021 left.


Draw a picture to represent this equation: 6513-4000= $\qquad$
Solve the problem:
There are 5525 tickets to sell. So far they have sold 3000 tickets. How many tickets are left to sell?

## Subtracting Thousands ON A PLACE VALUE CHART

Let's use place value charts to subtract 1000 and multiples of 1000 !

|  | Th | H | T | 0 |  | Th | H | T | 0 |  | Th | H | T | 0 |  | Th | H | T | 0 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 4 | 6 | 2 | 1 | -2000= | 2 | 6 | 2 | 1 |  | 5 | 5 | 2 | 9 | -4000= | 1 | 5 | 2 | 9 |
|  | When we subtract 2000, we just subtract 2 groups of IOOO! |  |  |  |  |  |  |  |  |  | When we subtract 4000 , we just subtract 4 groups of 1000 ! |  |  |  |  |  |  |  |  |

Complete each equation.

| Th | H | T | 0 |  | Th | H | T | 0 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 7 | 3 | 5 | 5 | -2000= |  |  |  |  |
| 7355-2000= |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
| Th | H | T | 0 |  | Th | H | T | 0 |
| 1 | 7 | 1 | 2 | - 1000= |  |  |  |  |
| 1712-1000= |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |
| 2 | 3 | 3 | 6 | - 1000= |  |  |  |  |
| 2336-1000= |  |  |  |  |  |  |  |  |



$\qquad$
$6228-4000=$

Solve these equations:

| $3376-1000=\_$ | $2287-1000=\_$ | $9569-8000=\_$ |
| :--- | :--- | :--- |
| $8539-4000=\_$ | $3522-2000=\_$ | $3400-1000=$ |
| $1234-1000=\_$ | $7669-5000=$ | $2009-1000=$ |
| $6390-3000=\_$ | $4087-3000=$ |  |
|  |  | $6226-2000=$ |

 Thousands
If the difference is $\underline{O D D}$, shade the box green. If the difference is EVEN, shade the box purple.


1145-1000=
6312-2000=

1908-1000=
2235-1000=


## PUTTING IT ALL TOGETHER Equation Hunt

Subtract any two numbers that are touching. Remember to use the big number first. Shade them in and write the equation (with the difference) in the box.

| 1000 | 2456 | 2456 | 768 | 125 | 25 | 6785 | 4 | 4000 | 12 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 600 | 9 | 5541 | 40 | 4567 | 1123 | 100 | 70 | 2000 | 6 |
| 100 | 425 | 5 | 8 | 1 | 3876 | 3867 | 5066 | 490 | 908 |
| 1000 | 427 | 30 | 2432 | 2441 | 24 | 12 | 0 | 50 | 9 |
| 800 | 8 | 8000 | 1000 | 4325 | 8 | 546 | 8 | 9 | 5464 |
| 900 | 200 | 800 | 400 | 7 | 4456 | 3 | 6574 | 9 | 5460 |

600-100=500
Ч५56-3=५५53
-
$=$ $\qquad$
$\qquad$ - $\qquad$ $=$
$\qquad$
$=$ $\qquad$
$\qquad$ $-$
= $\qquad$
$-$
$=$
-
$=$ $\qquad$ - $\qquad$ $=$ $\qquad$
$\qquad$
$\qquad$ $-$
$\underline{ }$
$=$ $\qquad$
$\qquad$

- $\qquad$ $=$ $\qquad$
$\qquad$
$\qquad$ - $\qquad$ $=$ $\qquad$
$\qquad$ -___ $=$ $\qquad$
$-$
$\qquad$
$-\quad=$
$=$ $\qquad$ $=$


## Jor the Teacher

## Level \#|6: Compensation

In the "Subtract 7, 8, and 9" level, students actually have learned the concept of compensation. Compensation means changing the subtrahend to make the equation easier, and then adjusting the difference to make up for that change. For example, when we taught students to perform a-8 equation as shown below, we were teaching them how to use compensation. We change the 8 to a 10 to make the equation easier, and then compensate for that change when we add 2 to the difference in the final step.

## Example:

75-8 $\longrightarrow 75-10=$
2 more than 65 is $\qquad$ .

In this level, we will expand on this knowledge. Students will learn to use the compensation strategy with larger numbers ending in 7,8 , and 9 . Here are a couple of examples:

Example \#:
$124-18 \longrightarrow 124-20=104$
2 more than 104 is 106.

Example \#2:
6542-199
6542-200=6342 $\longrightarrow$ I more than 6342 is 6343 .

Example \#3:
245-37 $\longrightarrow$ 245-40=205
$\longrightarrow 3$ more than 205 is 208.

At the end of this level, compensation will be integrated with all previous strategies.

## What is Compensation?

We have already learned how to subtract 7,8 , and 9 . Let's review that:


The strategy that you learned for subtracting 7, 8, and 9 actually is compensation! You already know this strategy! Now we are going to make it more challenging. Take a look at the equations below.

| 83-18 |  | 83-20= |  | 2 more than 63 is |
| :---: | :---: | :---: | :---: | :---: |
| This looks difficult |  | Let's take away 2 extra and make the 18 into a friendly number! $83-20$ is much easier to solve! |  | Now we have to ADD 2 to <br> the answer, since we took away 2 extra. |
| 54-39 |  | $54-40=$ | $\rightarrow$ | I more than 14 is |
| This looks difficult |  | Let's take away l extra and make the 39 into a friendly number! $54-40$ is much easier to solve! |  | Now we have to ADD I to the answer, since we took away l extra. |

# Compensation Practice 

Let's practice using compensation!



# COMPENSATION ON A NUMBER LINE 

Let's use a number line for the compensation strategy.
EXAMPLE: 354-48


1 First do 354-50. This is easier!
2 Now add 2 more (because you took away 2 extra one in step \#I).

Now it's your turn!
$83-39=$


142-27=

$356-29=$


Use the number line to help you use the compensation strategy.
452-29=
$238-17=$

447-39=

96-58=

1240-29=

How are you feeling about this strategy? Is it getting easier for you?

## COMPENSATION CHALLENGE

Solve the equations using the compensation strategy. Use the blank space to do your calculations if you need to. If you can do it all in your head, that is fine too!
$622-18=$


1274-37= $\qquad$

83-38= $\qquad$


$748-29=$ $\qquad$ 446-37=

Draw a number line to represent $9 Ч-49$ :
$94-49=$

EXTRA CHALLENGE! Can you use the same strategy to solve these more difficult equations?
24५5-19= $\qquad$ 9520-398= $\qquad$ 3155-37=
1734-519= $\qquad$ 9040-29= $\qquad$
3091-38= $\qquad$
$\qquad$ 4336-7= $\qquad$
$\qquad$
4942-27=
$\qquad$ 2222-199=

## Putting It All Together:

"POP" each balloon by solving the equation inside it!


## Jor the Jeacher

## Level \#|7: Expanding the Subtrahend

This is the final level in The Subtraction Station!

In this level, students will learn a higher-level subtraction strategy called "Expanding the Subtrahend." To perform this strategy, students break apart the second number and subtract it from the larger number in 2 parts. Let's take a look at an example:

Example:


Step 1: 43-20=23
Step 2: 23-l=22

At the end of this level students will integrate the concept of "Expanding the Subtrahend" with all of the previous strategies that have been learned.
*** In this level, most of your assessment should be based on 2 and 3-digit equations. The most important aspect is that your students understand the process for decomposing (expanding) the second number.

# Let's Decompose Numbers! 

Write each number in the place value chart. This is called "decomposing a number" or "expanding a number."

| 2581 | Th | H | T | 0 |
| :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |



Decompose (or expand) each number.


## THE ONES

We can EXPAND the smaller number (the subtrahend) to make a subtraction equation easier to solve. Take a look!


Step 1: 74-20=54
Step 2: $54-3=51$

Now it's your turn!

65-14=


Step 1: 65-10=
Step 2: 55-4= $\qquad$

87-33= _Step 1:87-30=
Step 2: 57-3= $\qquad$

53-23=


Step 1: 53-20= $\qquad$
Step 2: 33-3=
$\qquad$
$75-24=$ $\qquad$ Step 1: __-20=
Step 2: $\qquad$ $-4=$ $\qquad$

97-53=
$\qquad$
Step I: $\qquad$ $-\quad=$
$\qquad$
Step 2: $\qquad$ - $\qquad$ $=$ $\qquad$

# EXPANDING THE SUBTRAHEND 

STEP I: Subtract the tens.
STEP 2: Subtract the ones.

| 83-21 <br> Step 1: $\qquad$ $-\quad=$ $\qquad$ <br> Step 2: $\qquad$ $=$ $\qquad$ | $\qquad$ |
| :---: | :---: |
| Step 1: $\quad-\quad-\quad=-$ Step 2: $\quad-\quad=$ | Step : $\quad$$67-32$ <br> Step 2: $\quad-\quad-\quad=$ <br> $=$ |
| $96-26$ Step 1:__-_ $=-$ Step 2: $\quad-\quad=$ | $35-14$ Step $: \quad Z_{1} \quad-\quad=-$ Step 2: $\quad-\quad=$ |
| $95-72$ Step 1: $\quad-\quad-\quad=$ Step 2: $\quad=-\quad=$ |  |
|  | $76-35$ Step : $\quad Z_{-}-\quad=$ Step 2: $\quad=-\quad=$ |

## EXPANDING THE SUBTRAHEND <br> WITH BIGGER NUMBERS

When we work with bigger numbers, we use the exact same steps. We break the second number into parts and subtract one part at a time.


Step 1: 859-700=159

Step 2: 159-30=129
Step 3: 129-5=124

Now it's your turn!


Step 1: 562-300=
Step 2: 262-30=
Step 3: 232-I=

$500 \quad 10 \quad 3$

Step 1: 875-500=
Step 2: 375-10= $\qquad$
Step 3: 365-3= $\qquad$

Step 1: 8517$=$ $\qquad$
Step 2: 7517$=$ $\qquad$
Step 3: 7217$=$ $\qquad$
Step 4: 7207$=$ $\qquad$

639-225=
Step 1: 639$=$

Step 2: 439- $\qquad$ $=$

Step 3: 네q- $\qquad$ $=$
$\qquad$

## LET'S PRACTICE

|  |  |
| :---: | :---: |
| 86-32 <br> Step I: $\qquad$ - $\qquad$ $=$ $\qquad$ <br> Step 2: $\qquad$ - $\qquad$ $=$ $\qquad$ | 75-23 <br> Step I: $\qquad$ $-\quad=$ $\qquad$ <br> Step 2: $\qquad$ $-$ $=$ $\qquad$ |
|  | $\qquad$ |
| $\qquad$ | 742-32\| <br> Step I: $\qquad$ - $\qquad$ $=$ $\qquad$ <br> Step 2: $\qquad$ - $\qquad$ $=$ $\qquad$ <br> Step 3: $\qquad$ - $\qquad$ $=$ $\qquad$ |



## Problem-Solving

4526 tickets were sold for the event. 3215 people showed up. How many people bought tickets, but did not come?
[ Show your work. $\square$ Write an answer sentence.

The bake sale raised a total of $\$ 2387$ for the school! They made $\$ 1254$ of that on Monday, and the rest on Tuesday. How much money did they raise on Tuesday?
[ Show your work.

- Write an answer sentence.

Altogether in January and February, the Grade 4 class read 3518 pages! They read 2305 of those pages in January, and the rest in February. How many pages did they read in February? - Show your work. Write an answer sentence.

# PUTTING IT ALL TOGETHER Subtraction Frenzy! 



Complete the subtraction tables:

| -100 |  |
| :---: | :---: |
| 445 | 345 |
| 9214 |  |
| 6363 |  |
| 2000 |  |
| 1023 |  |


| -9 |  |
| :---: | :---: |
| 32 |  |
| 751 |  |
| 86 |  |
| 3722 |  |
| 1234 |  |


| -2000 |  |
| :---: | :---: |
| 3592 |  |
| 5491 |  |
| 4000 |  |
| 9090 |  |
| 2645 |  |


| -300 |  |
| :---: | :--- |
| 539 |  |
| 1299 |  |
| 6482 |  |
| 600 |  |
| 857 |  |


| -8 |  |
| :---: | :---: |
| 56 |  |
| 354 |  |
| 1290 |  |
| 3245 |  |
| 16 |  |


| -19 |  |
| :---: | :---: |
| 234 |  |
| 47 |  |
| 692 |  |
| 82 |  |
| 1243 |  |

## Bonus Ictivity- Jeacher enstructions

Include this activity at the end of Level 17 in your Subtraction Station.

This activity integrates all of the strategies in The Subtraction Station.

## Overview:

In this Bonus Activity, students choose a task card, subtract the numbers, and record the equations in their notebook or on the recording sheet.

## Preparation:

- Print and laminate task cards.
- Make copies of recording sheets (you may wish to have students record the answers in their notebooks instead).
- To set these up, I typically cut out the title and directions and paste them on either side of a piece of cereal box cardboard. I store the center pieces in small re-sealable bags, and then keep everything in a large re-sealable bag. I've made a video showing how I make and store the center pieces that you can watch by clicking here:
https://www.youtube.com/watch?v=Z4EKxxCYnjo\&feature=youtu.be


# "Springtime" <br> Subtraction <br> Math Center 



## "Springtime" Math Center

## Directions

Choose an equation card. Read the equation and find the matching difference. Place the two cards together and record the equations on the recording sheet.


## 4252-4252

## 1080-0



7590-I

## 5000-1000



## 1243-243

## 8000-4000

## 240-120



## 50-네



## 10-7

## 100-40



## 1000-200

## 43-36



## 462-7

## 183-177



## 1461-1457

## 324-20

## $\begin{array}{r}1461 \\ \text { (c) } 89 \\ \hline\end{array}$

## 1562-40

## 266-100



## 4481-300

## 591-8

## 2243-9



## 7092-3000

## 56-17



245-19

## 621-18



## 748-231






Record the minuend, subtrahend, and difference for each equation.

| Minuend | Subtrahend | Difference |
| :--- | :--- | :--- |
|  |  |  |
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## Jor the Jeacher

## Putting It All Together

Your students have now learned all of the strategies in The Subtraction Station. By now your students should have a good understanding of many different mental math strategies. They should be working on using the most effective and efficient one for each equation.

This final level is included as a "Putting It All Together" level. In this level, students will practice all of the strategies that they have learned. They will practice choosing the strategy that is best. You may also notice that by this time your students are developing automaticity with some of the facts. This means that they may be starting to just "know" the fact, without even thinking too much about it. This is fantastic, and is what all of your students should be striving for.

## PUTTING IT ALL TOGETHER

## How Did You Solve That?

Solve each equation using a strategy that you have learned. Then explain how you solved it.

## $3542-18=$

How did you solve this?

## $4521-2000=$

How did you solve this?
$\qquad$
Solve the equations:
$4632-0=$ $\qquad$ $4568-3000=$ $\qquad$ $457-9=$ $\qquad$
$1000-500=$ $\qquad$
$240-120=$ $\qquad$ $5722-19=$ $\qquad$ 4766-600=
$\qquad$ $6100-100=$
2453-37=

## Equation Hunt

Subtract any two numbers that are touching. Remember to use the big number first. Shade them in and write the equation (with the difference) in the box.

| $2 Ч ५ 2$ | Ч५2 | 100 | 6573 | 2234 | 48 | 16 | 8 | 8000 | 600 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 50 | 900 | 400 | 29 | 2234 | 6049 | 100 | 745 | 4000 | 100 |
| 47 | 500 | 1000 | 500 | 546 | 28 | 96 | 322 | 4593 | 27 |
| 4572 | 4000 | 56 | 17 | 323 | 22 | 9042 | 140 | 8 | 2267 |
| 10 | 435 | 4233 | 100 | 90 | II | 1021 | 0 | 4378 | 4 |
| 5 | 7 | 100 | 1246 | 9 | 8 | 3462 | 1 | 1243 | 1000 |
| 3490 | 4574 | 19 | 10 | 20 | 16 | 3000 | 1000 | 9 | 600 |
| 2 | 2000 | 8 | 500 | 200 | 100 | 40 | 3443 | 18 | 28 |
| $50-47=3$ |  |  |  |  |  |  |  |  |  |
| $3462-1=3461$ |  |  |  |  |  |  |  |  |  |
| - |  |  |  |  |  |  |  |  |  |
| $-$ |  |  |  |  |  |  |  |  |  |
| $-$ |  |  |  |  |  |  |  |  |  |
| $-$ |  |  |  |  |  |  |  |  |  |
| - |  |  |  |  |  |  |  |  |  |
| - $=$ |  |  |  | - | $=$ |  |  | - |  |

In one day, the bread factory ships out 1250 loaves of bread. Today, however, one of the machines broke down and the shipment is down by 68 loaves. How many loaves of bread were shipped out today?


Every year, the children in two schools plant trees on the school yards. School A has planted 267 trees. School B has planted 479 trees. How many more trees has School B planted than School A?


Write an answer sentence.

Write a story problem for this equation: 1725-49= $\qquad$ Solve it.
$\qquad$
$\qquad$
$\qquad$

|  | ubtraction Action! |  |
| :---: | :---: | :---: |
|  |  |  |
| 256-18 | 289 | 8877-8877= |
| 50-43= | ЧЗ54-4= | 456-38= |
| 7000-1000= | 457-124= | 4721-500= |
| 8900-4000= | 6500-2000= | 5487-2263= |
| $24-12=$ | 4536-8= | 345-25= |

Complete the subtraction wheels:


The hardest thing about subtracting is $\qquad$

